Botanical Bulletin.

Vol. 1. FEBRUARY, 1876. *No. 4.*

SOME NOTES ON THE FLORA NEAR KALAMAZOO, MICH.—*Nelumbium luteum*, Willd. is found 14 miles south of this place, and this, I believe, is its only station in our state where it flowers. It grows in a mill-pond, and hence must have been introduced after the country was settled. *Nasturtium officinale*, R. Br., from a specimen introduced some years ago, is now choking completely some of our small brooks. We have *Dentaria diphylla*, L., and *D. laciniata*, Muhl., the latter being quite true to its typical form. We find here but one species of *Claytonia*, *C. Virginica*, L. *Sium angustifolium*, L., is abundant. *Vernonia fasciculata*, Mx., is found in the western part of the state, while *Vernonia Noveboracensis*, Willd., takes its place in the eastern half. We have all the species of *Lysimachia*, Tourn., mentioned in Gray's Manual except *L. radicans*, Hook. Our species of *Gerardia*, L., are *purpurea*, L., *flava*, L., and *quercifolia*, Pursh. *Collinsia verna*, Nutt., in our moist woods is one of our loveliest spring flowers. The *Castilleia coccinea*, Spreng., about here is always of the yellow variety. *Polygonum Hartwrightii*, Gray, is found along our new railways where they cross the flats adjoining the river. Where can a description of this species be found? In May, 1873, I discovered a specimen of *Salix discolor*, Muhl., having both male and female flowers in the same catkins. Visiting it when in fruit the seeds seemed quite normal. Is this of common occurrence? *Symplocarpus fœtidus*, Salisb., is our earliest harbinger of spring. While the earth is still locked in winter's frozen embrace, in favored spots this hardy plant pushes up its spathes and opens its flowers. Its leaves are already, Jan. 27, piercing the surface, and I have found its fully opened blossoms on the 15th of February, when sleighs were still in use on our streets. Of Orchids we list *Orchis spectabilis*, L., *Habenaria viridis*, R. Br., var. *bracteata*, Reich., *H. psycodes*, Gray, *Spiranthes cernua*, Richard, *S. gracilis*, Big., *Arethusa bulbosa*, L., *Pogonia verticillata*, Nutt., *Calopogon pulchellus*, R. Br., all the species of *Cypripedium* mentioned by Gray, except *arietinum*, R. Br., and *Aplectrum hyemale*, Nutt. This last is abundant in our beech woods and its green leaves are very noticeable after the snow of winter has gone, but after vegetation has started it is almost impossible to discover its dingy flowers. Our *Trilliums* are *grandiflorum*, Salisb., and *erectum* L., var. *declinatum*, Gray, which passes into *cernuum*, L. *Eriocaulon septangulare*, With., found here seems to be 8-striate.

Among plants whose habitat is chiefly south of this, we have *Asimina triloba*, Dunal, *Solea concolor*, Ging, *Viola pedata*, L., *V. rostrata*, Pursh. (flowering in May), *Mollugo verticillata*, L., *Gleditschia triacanthos*, L., *Œnothera fruticosa*, L., *Chœrophyllum procumbens*, Lam., *Nyssa multiflora*, Wang., *Viburnum prunifolium*, L., while the northern *Zygadenus glaucus*, Nutt., *Tofieldia glutinosa*, Willd., and *Hierochloa borealis*, Rœm. & Schultes, are found in low meadows. *Heuchera hispida*, Pursh, grows on dry soil; *Hydrocotyle umbellata*, L., thrives on the shore of a pond; and *Woodwardia Virginica*, Smith, abounds in some of our swamps. *Malva Alcea*, L., and *Sida Napœa*, Cav., have established themselves in one station by the railroad, and *Cenchrus tribuloides*, L., may have been brought by the same agency. *Erodium cicuta-*

All communications addressed to John M. Coulter, Hanover, Ind.

Terms:—Subscription $1.00 a year. Single Numbers 10 cents.

rium, L'Her., has come sparingly, whether from the east or the west, I know not. A few specimens of *Trifolium procumbens*, L., and one of *Lepidium campestre*, L., have been detected here. *Tragopogon pratensis* also is sometimes spontaneous by our roadsides.—FRANK H. TUTHILL, *Kalamazoo, Mich.*

In answer to a query contained in the above article we have inserted a translation of Dr. Gray's description of *Polygonum Hartwrightii*.

POLYGONUM HARTWRIGHTII, Gray (*Proc. Amer. Acad., Dec.* 1870).—PERSICARIA. DIGYNA. Strigose-hirsute or smoothish; stem less than a foot high, erect, striate, equally leafy even to the top; leaves broadly lanceolate, acute or obtusish at each end, short-petioled; ochreæ leaf-like to the middle, hypocrateriform, limb foliaceous, reticulate, repand, setose-ciliate; peduncle erect, not glandulose, bearing mostly a solitary, dense, cylindrical spike; bracts surpassing the pedicels, perigonium rose-colored, without glands; stamens 5; style deeply 2 cleft.—Sedgy bogs, New York, from Herkimer to Yates county, and Michigan.

This plant was collected also at Fort Bridger, southwestern Wyoming, in August, 1873, by Prof. Porter.

SOME PLANTS COMMON TO PLUMAS COUNTY, CALIFORNIA, AND THE BLACK HILLS OF DAKOTA.—In the list of plants collected in the Black Hills during the summer of 1874, I am pleased to observe that sixteen of its species enumerated are found in abundance in our county, viz:

Aconitum nasutum, Fisch.
Lupinus ornatus, Dougl.
Lupinus leucophyllus, Lindl.
Carum Gairdneri, Benth. & Hook.
Erigeron Canadense, L.
Achillea Millefolium, L.
Lophanthus anisatus, Benth.
Gilia pungens, Benth.
Linum perenne, L.
Lupinus parviflorus, Nutt.
Epilobium angustifolium, L.
Galium boreale, L.
Chænactis Douglasii, Hook. & Arn.
Mimulus luteus, L.
Stachys palustris, L.
Collomia linearis, Nutt.

MRS. MARY E. PULSIFER AMES, *Taylorsville, Indian Valley, Plumas Co., California, Dec.* 8, 1875.

A NEW LOCALITY FOR THE YELLOW-RATTLE.—*Rhinanthus Crista-galli*, L., is an abundant plant here. In June its blossoms are quite conspicuous in the meadows bordering the Naugatuck river and occasional specimens may be found upon the hills. The only localities in the United States hitherto recorded are a small patch discovered by Professor Tuckerman in the "subalpine district" of Mt. Washington, N. H., and the meadows of Plymouth, Mass., where it was found by Dr. Bigelow. Messrs. Hall and Harbour also found it in the Rocky Mountains of Colorado Territory in 1862. It occurs upon the north shore of Lake Superior, according to Professor Agassiz, and "in fields and meadows," Lower Canada, according to Pursh, and probably it is common northward. Now that Hermann Müller has shown the plant has not the characters of an alpine species, it must be regarded as a straggler in its position upon Mt. Washington, and its occurrence in Waterbury renders it probable that the plant is (contrary to Professor Gray's supposition) indigenous at its Plymouth locality.—W. H. PATTON, *Waterbury, Conn.*

SOME GREAT RAGWEEDS.—In the river bottom below the village of Hanover, is a ravine of about twenty rods in length by four or five in breadth, frequently flooded by the backwater in freshets, which seems to have taken advantage of its exposure to the sun and its facilities for the enrichment of its soil, to achieve something extraordinary in the way of vegetation. To make sure of its end it has entered into an alliance offensive and defensive with *Ambrosia trifida*, L., the Great Ragweed. The Ragweeds have sole and full possession, and so thickly do they send up their trunks and so loftily do they rear their heads that no other herb can get either sun or soil on their territory. Several years ago, with a companion, I made a reconnoissance among them and found them averaging from twelve to eigh-

teen feet in height. Two specimens of the latter altitude my companion and myself secured, and, having duly measured, deposited in the college cabinet as samples of what that ravine can do in Ragweeds.—PROF. W. N. GEDDES, *Hanover, Ind.*

THE NUMERICAL RELATIONS EXISTING AMONG THE FOREST TREES OF JEFFERSON CO., IND.—In a region with a flora so diverse as is met in Southern Indiana, we would naturally expect to find striking differences in the proportions which the forest trees bear to each other in different localities; nor are we disappointed in this in Jefferson County. From the proximity to the river and consequent ease of transportation, large numbers of valuable trees have been shipped, so that in the forests nearest the Ohio there is a striking lack of valuable timber and an almost total absence of the Black Walnut (*Juglans nigra*, L.). The numerous stumps of this last, however, give evidence of its former abundance. Along the southern slopes of the county and back some two or three miles on the hills the Beech (*Fagus ferruginea*, Ait.) is by far the most abundant, filling forest after forest almost exclusively. In this southern section it constitutes nearly 70 per cent. of the entire number of trees found. Farther north in the county the Oaks come into prominent notice in their numerous species, in the central strip of the county constituting fully 40 per cent. of all the trees. Still farther north we have the different genera more equally distributed, none having any special predominance. In my notes of 1873, I find the following table, based on a thorough observation of the forests of the county.

Fagus ferruginea, Ait. (AMERICAN BEECH.)	35 per cent.
Querci. (OAKS.)	18 " "
Liriodendron Tulipifera, L. (TULIP-TREE.)	10 " "
Acer rubrum, L. (RED MAPLE.) *Acer saccarhinum*, Wang. (SUGAR MAPLE.)	5 " "
Fraxinus Americana, L. (WHITE ASH.) *Fraxinus quadrangulata*, MX. (BLUE ASH.)	5 " "
Juglans nigra, L. (BLACK WALNUT.)	5 " "
Carya alba, Nutt. (SHELL-BARK HICKORY.)	5 " "
Platanus occidentalis, L. (SYCAMORE.)	3 " "
Æsculus glabra, Willd. (OHIO BUCKEYE.) *Æsculus flava*, Ait. (SWEET BUCKEYE.)	2 " "
Ulmus Americana, Willd. (WHITE ELM.)	2 " "
Other species,	10 " "
	100

In this calculation many of the less prominent trees were omitted. Had they been included the results reached would doubtless have been considerably modified. The total disregard for the preservation of our forests, which seems to characterize the modern land owner, may have materially changed these results even in the brief time that has elapsed since my notes were made. In concluding, allow me to ask botanists in other localities to furnish me, through the BULLETIN, their observations on this subject of numerical relations.—M. S. COULTER, *Logansport, Ind.*

SOME EARLY PLANTS.—On January 25th, accompanied by a friend, I made a search through our ravines to find what effect the warm weather was having on vegetation. *Capsella Bursa-pastoris*, *Stellaria pubera* and *S. meadia* were found in vigorous growth and full bloom, the last species covering the ground with its bright green mats. *Corydalis flava* and *Sedum ternatum* were well up and in bud. *Viola cucullata* had fully matured leaves, *Arabis lævigata* was two or three inches high and *Stylophorum diphyllum* was well started. *Peziza coccinea* was beautifying the ground with its cluster of scarlet lined cups. *Lepidium Virginicum* was in full bloom on Jan. 1st, and many of those mentioned above were in bud at that time. M. S. Coulter, writing from Logansport, in the northern part of the State, says, "on the 28th of Jan., I struck our promiscuous friend, *Capsella*, in full bloom, and *Stellaria pubera* so nearly out that it is certainly in full bloom to-day."—ED.

The Botanical Contribution by Dr. Gray, issued January 5th, 1876, is remarkably rich in new material. It contains the descriptions of 50 new species and 4 new genera, besides the revision of several genera. The indefatigable Dr. Edward Palmer has been collecting in Lower California and on Guadalupe Island off Lower California and has brought in a rich harvest. Twenty-two new species and three new genera prove his zeal and success. The new genera proposed are *Palmerella* of the *Lobeliaceæ*, *Hesperelæa* of the *Oleaceæ* and *Harpagonella* of the *Borraginaceæ*. Another new genus of the *Borraginaceæ* is described, called *Echidiocarya*. T. S. Brandegee, of Hayden's Exploration of 1875, has added five new species to the flora of Colorado, and other parties three more, making an addition of eight new species. Dr. Gray has also given us in this contribution a revision of American *Specularieæ*. Also a revision of the genus *Collinsia* in North America, making eleven species; a revision of North American *Mimuli*, making twenty-nine species, and a revision of the genus *Monardella*, with eleven species. Altogether, the contribution is one of unusual interest and a valuable addition to western botany.

We have received a circular from Prof. Herbert E. Copeland, of Indianapolis, Ind., announcing a "Summer School of Science and Physical Culture." The route chosen is a most tempting one to botanists, and it is doubtful whether any other route of similar extent could be selected which would present so rich and varied a flora. The school leaves Indianapolis July 11th, goes by way of Mammoth Cave to Lookout Mountain where it disbands August 22d. Prof. Copeland will have the Botany of the Expedition in charge and will communicate to the BULLETIN any notes of interest.

BOOKS AND PAMPHLETS RECEIVED.—*Exploration of the Colorado River of the West and its Tributaries.* Explored in 1869, 1870, 1871, and 1872, under the Direction of the Smithsonian Institution. By J. W. Powell. Washington, D. C., 1875.

Report of a Reconnoissance of the Black Hills of Dakota, made in the Summer of 1874. By William Ludlow, Capt. of Engineers. Washington, D. C., 1875.

Report of the Geological Survey of the State of Missouri, including Field Work of 1873-1874, with 91 Illustrations and an Atlas. Garland C. Broadhead, State Geologist. Jefferson City, Mo., 1874.

Botanical Contributions. By Asa Gray. Extracted from the Proceedings of the American Academy of Arts and Sciences, Vol. XI. January 5, 1876.

Catalogue of the Plants of Ohio, including Flowering Plants, Ferns, Mosses and Liverworts. By H. C. Beardslee. Painesville, Ohio, January, 1874.

Bulletin of the Torrey Botanical Club, New York, December, 1875.

The Black Spruce. By Charles H. Peck, A. M. Read before the Albany Institute, May 4, 1875.

The Nelumbium Luteum or Great American Water Lily. Its Value as an Ornament to the Public Parks of Chicago. By E. M. Hale, M. D. Chicago, Ill., 1871.

Notes on the Big Woods. By Prof. N. H. Winchell. Extracted from the Annual Report of the State Horticultural Society for 1875. Minnesota.

Bulletin of the United States National Museum. No. 1.—Check-List of North American Batrachia and Reptilia. By Edward D. Cope. Washington, D. C., 1875.

Bulletin of the United States National Museum. No. 2.—Contributions to the Natural History of Kerguelen Island. By J. H. Kidder, M. D. Washington, D. C., 1875.

Bulletin of the United States Geological and Geographical Survey of the Territories. Bulletin, No. 5.—Second Series. Washington, D. C., January 8, 1876.

The Scientific Monthly. A Magazine Devoted to the Natural Sciences. Vol. I., No. 3. December, 1875. E. H. Fitch, Editor and Proprietor. Toledo, Ohio. $3.00 a year.

Bulletin of the United States Geological and Geographical Survey of the Territories. Bulletin, No. 6.—Second Series. Washington, D. C., February 8, 1876.